



October 30, 2009

Mr. Christopher Meyer
Project Manager
Attn: Docket No. 08-AFC-5
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: SES Solar Two (08-AFC-5)
Additional Supportive Materials – Biology and Water
URS Project No. 27657106

DOCKET

08-AFC-5

DATE OCT 30 2008

RECD. OCT 30 2008

Dear Mr. Meyer:

On behalf of SES Solar Two, LLC, URS Corporation Americas (URS) would like to provide a brief update on the Solar Two Project.

As documented in the AFC and POD submissions, the applicant avoided environmental constraints through project engineering and design, wherever practicable. Inclusive in this, was the attempt to avoid development within wash areas on the project site. However, during the development of 30% engineering and design plans, it was determined that impacts to some of these washes are unavoidable.

URS analyzed potential impacts on Biological and Water Resources associated with development. The additional supportive materials provided in this submittal include: a copy of the California Department of Fish & Game's Streambed Alteration Agreement Application, the Regional Water Quality Control Board's Section 401 Water Quality Certification Application, and the Water Resources Impact Analysis to support the AFC and Supplemental Analysis.

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to submit this information on behalf of SES Solar Two, LLC.

Sincerely,

URS CORPORATION

Angela Leiba
Project Manager

cc: Richard Knox, Tessera Solar
SES Solar Two Proof of Service List

WATER RESOURCES

Affected Environment

The affected environment for Water Resources was originally discussed in Section 5.5.1 of the Application for Certification (AFC). There are no proposed changes for the affected environment for Water Resources.

Environmental Consequences

Water supply, use and water quality will not change from what was originally discussed in Section 5.5.2 of the Application for Certification (AFC) and Section 2.5 in the Supplement Filing (dated June 12, 2009).

Storm Water Runoff and Flooding Hazards

As identified in Section 5.5.1.8 of the AFC, portions of the Project Site are located in FEMA-designated special flood hazard areas. The base flood elevations and flood hazard factors have not been determined by FEMA for these flooding areas. Erosion, sediment transport, and deposition all occur on the site under existing conditions. A Project specific Drainage, Erosion, and Sediment Control Plan (DESCP) and draft Construction Storm Water Pollution Prevention Plan (SWPPP) have been completed for the Project which identifies required Best Management Practices (BMPs) such as debris basins and berms to control sediment and erosion on the site both during and after construction. This information was docketed July 2009. Implementation of these plans will ensure that the Project will not significantly increase the risk of flooding, erosion, or siltation.

A Hydrologic Assessment Report was developed by RMT, dated September, 2009, last revised October 2009 (RMT, 2009). This report includes a schematic illustrating the 100-year floodplain limits based on their hydrologic modeling. Individual SunCatchers or groups of SunCatchers will be located in portions of the floodplain mapped by RMT, providing that they can withstand projected scour. SunCatchers located within the estimated 100-year floodplain have been evaluated for flooding effects and scour depth. RMT used the Federal Highway Administration (FHWA) document entitled “Evaluating Scour at Bridges” (FHWA) to estimate the scour that may occur for the SunCatchers in the floodplain limits. A maximum scour depth of 5 feet was determined, with corresponding water velocities of 8 to 10 feet per second. More common flow velocities of 2 to 5 feet per second will have approximate scour depths of 2 to 3.5 feet. As storm water runoff flows from the south to the northeast portions of the project site, water has the potential to increase velocity and it is expected that SunCatchers on the northeast portion of the project site will generally incur deeper scour than those found in the middle or south portion of the site.

Additionally, RMT discussed the expected sediment transport and deposition. Current conditions on-site create a net positive sediment balance (accumulation of sediment) within the project limits. The existing embankments of the railroad and Dunaway Road prevent the sediment from transporting as it otherwise normally would. The positive sediment balance may require the Project to redeposit soil within the Project site when necessary.

As discussed in Section 5.5.2.4 of the AFC, although minimal changes in absorption rates, drainage patterns, or the rate or amount of surface runoff will occur due to the surface paving and the presence of new structures, surface water runoff will be contained and allowed to drain naturally, evaporate, and percolate. Each SunCatcher unit has a 2-foot diameter and common width of floodplain is 264 feet (Basin “E”, RMT, 2009). With SunCatchers being placed at 100 feet apart, only 2 structures can be placed in the width of a floodplain. This represents less than 2 percent of the width of the floodplain.

In addition to evaluation of the 100-year floodplain, 5- and 10-year discharges and associated floodplains were evaluated and mapped as shown on Figure 1. Table 2.5-1 below provides a comparison of the 5-, 10-, and 100-year discharges. This table also provides an estimate of the 8-year discharge (interpolated between the 5- and 10-year discharges). The 8-year discharge was requested for potential biology assessment relating to potential jurisdictional delineation.

**Table 2.5-1
Hydrology Runoff Rates**

Drainage Area	5-year Discharge (cfs)	8-year Discharge Estimate (cfs)	10-year Discharge (cfs)	100-year Discharge (cfs)
DUNAWAY	822	1,097	1,372	4,223
H	184	258	332	1,168
H1+H2	183	258	333	1,192
H1N	137	194	251	898
H1S	103	149	195	718
H2N	55	80	105	387
H2S	47	68	89	331
DUNAWAY SUB	712	949	1,187	3,654
EFG	711	949	1,188	3,661
G North	148	203	257	845
G1+G2+G3	116	163	210	748
G1N	41	61	80	296
G1S	16	24	31	112
G2S	22	33	43	158
G3S	72	101	131	467
EF	646	861	1,076	3,329
B North	22	32	42	150
F	91	131	171	624
C2	18	26	34	126
C North Total	143	198	253	871
CN3 Total	141	197	254	899
CN3 Sub	133	186	240	848

Table 2.5-1
Hydrology Runoff Rates
(Continued)

Drainage Area	5-year Discharge (cfs)	8-year Discharge Estimate (cfs)	10-year Discharge (cfs)	100-year Discharge (cfs)
C-S	119	168	217	777
A+K	89	124	160	564
A North	49	70	91	333
A-S	25	37	49	181
K North Total	48	67	86	307
K-S	36	51	67	243
D North	95	133	171	607
D1	52	77	101	373
D2	24	35	46	171
D3	46	65	85	307
D-S	8	12	16	57
E3 Total	207	286	365	1,246
E1A + E1B	113	161	210	760
E1A	65	95	125	455
E1B	71	101	131	474
E2 Total	96	134	172	603
E1S + E2S	60	87	114	424
E2S	14	20	26	90
E1S	51	74	98	362
IJ	116	164	212	758
I+J	117	167	217	791
I North Total	100	143	186	678
I-S	92	134	175	651
J North Total	20	30	39	145
J-S	14	20	26	95

Cumulative Impacts

In regard to incorporating SunCatchers in the floodplain, potential cumulative impacts beyond those described in Project AFC Section 5.5.3 include an increase in localized scour on the SunCatchers located within the floodplain. This will result in the same net positive sediment balance (sediment accumulation) that occurs in existing conditions. The additional maintenance of redistributing the sediment throughout the project site will mitigate any negative impacts that may occur downstream of the Project.

Mitigation Measures

The mitigation measures and other discussion presented in Section 5.5.4 of the Project AFC are applicable to the proposed Project changes. No additional mitigation measures are recommended based upon the proposed Project modifications.

With implementation of the mitigation measures outlined in Section 5.5.4 of the Project AFC, the DESCP and construction SWPPP impacts to water resources as a result of construction and operation will be reduced to less than significant levels.

LORS Compliance

An update to the LORS Compliance Table (AFC Table 5.5-5) and Contact List Table (AFC Table 5.5-6) from the Project AFC are provided below as Table 2.5-2 and 2.5-3, respectively. The updates include previous updates provided in the Supplemental AFC filing and the requirement for submittal of a CLOMR for proposed development within the FEMA designated SFHA (100-year floodplains).

With structures proposed within the FEMA designated SFHA, a Conditional Letter of Map Revision (CLOMR), will need to be submitted for Project structures located in FEMA's Flood Insurance Rate Map (FIRM) Community Panel Numbers 0600650775B, effective date of 15 March 1984; 0600650975B, effective date of 15 March 1984; and 0600650935B, effective date of 15 March 1984. A Conditional Letter of Map Revision (CLOMR) allows FEMA to comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the the Special Flood Hazard Area (SFHA). The letter does not revise an effective National Flood Insurance Program (NFIP) FIRM map, it indicates whether the project, if built as proposed, and be recognized by FEMA by a map revision. FEMA charges a fee for processing a CLOMR to recover the costs associated with the review. Building permits cannot be issued based on a CLOMR, because a CLOMR does not change the NFIP map. After construction, a final Letter of Map Revision will be required.

**Table 2.5-2
Summary of LORS – Water Resources**

LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
Federal Jurisdiction				
CWA §402; 33 USC §1342; 40 CFR Parts 110, 112, 116	Requires NPDES Permits for construction and industrial storm water discharges. Requires preparation of a SWPPP and Monitoring Program.	Coverage under NPDES industrial storm water permit maybe required. NOI for coverage under NPDES construction storm water permit will be filed before construction.	SWRCB and RWQCB	J. Carmona

Table 2.5-2
Summary of LORS – Water Resources
(Continued)

LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
CWA §311; 33 USC §1342; 40 CFR Parts 122-136	Requires reporting of any prohibited discharge of oil or hazardous substance.	Project will conform by proper management of oils and hazardous substances both during construction and operation. If an accidental release or unintended spill occurs it will promptly be reported.	RWQCB and DTSC	J. Carmona
CFR, Title 40, Parts 124, 144 to 147	Requires protection of underground water resources	Underground water resources will be protected due to the lined evaporation pond.	Environmental Protection Agency	
National Flood Insurance Program Regulations (44 CFR, Part 65, 65.6, and 65.8)	Submittal of a Conditional Letter of Map Revision for proposed development and modifications to FEMA designated Special Flood Hazard Areas.	Project will conform by submitting a a CLOMR to FEMA.	Federal Emergency Management Agency, Imperial County	
State Jurisdiction				
CWC §13552.6	Use of potable domestic water for cooling towers and air conditioning is unreasonable use if suitable recycled water is available.	Recycled water will be the sole source of water for the project. No cooling towers are proposed.	SWRCB and RWQCB	J. Carmona / C. Raley
California Constitution Article 10 §2	Avoid the waste or unreasonable uses of water. Regulates methods of use and diversion of water.	Project includes appropriate water conservation measures, both during construction and operation.	SWRCB and RWQCB	J. Carmona
State Water Resources Control Board, Resolution No. 75-58	Addresses sources and use of cooling water supplies for power plants that depend on inland waters for cooling and in areas subject to general water shortages.	Recycled water will be the sole source of water for the project. No cooling towers are proposed.	SWRCB and RWQCB	J. Carmona (RWQCB), J. Kassel (SWRCB)
Porter-Cologne Water Quality Act of 1972; CWC § 13000-14957, Division 7, Water Quality	Requires State and Regional Water Quality Control Boards to adopt water quality initiatives to protect state waters. Those criteria include identification of beneficial uses, narrative and numerical water quality standards.	Project will conform to applicable state water standards, both qualitative and quantitative, before and during operation. Applicable permits will be obtained from Regional Water Quality Control Board.	SWRCB and RWQCB	J. Carmona

Table 2.5-2
Summary of LORS – Water Resources
(Continued)

LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
Title 22, CCR	Addresses the use of recycled water for cooling equipment	Recycled water will be the sole source of water for the project. No cooling towers are proposed.	California Department of Health Services and RWQCB	J. Stone (DEH) / C. Raley (RWQCB)
The Safe Drinking Water and Toxic Enforcement Act of 1986 (proposition 65), Health and Safety Code 25241.5 <i>et seq.</i>	Prohibits the discharge or release of chemicals known to cause cancer or reproductive toxicity into drinking water sources.	Project will conform to all state water quality standards, both qualitative and quantitative. Project will not discharge into any drinking water source. If an unintended spill occurs, reporting of spill will be prompt.	California Department of Health Services	J. Crisologo
CWC Section 461	Encourages the conservation of water resources and the maximum reuse of wastewater, particularly in areas where water is in short supply.	Recycled water will be the sole source of water for the project. No cooling towers are proposed.	SWRCB and RWQCB	J. Carmona / C. Raley
CWC Section 5002	Requires a "Notice of Extraction and Diversion of Water" to be filed with the State Water Resources Control Board on or before 1 March of the succeeding year.	Notice will be filed as required by state law.	SWRCB and RWQCB	C. Raley (RWQCB), J. Kassel (SWRCB)
CWC Section 13751	Requires a "Report of Completion" to be filed with the State Water Resources Control Board within 60 days of well construction.	A groundwater well is not proposed.	SWRCB and RWQCB	C. Raley / J. Carmona
California Public Resources Code §25523(a); 20 CCR §§1752, 1752.5, 2300 – 2309, and Chapter 2 Subchapter 5, Article 1, Appendix B, Part 1	The code provides for the inclusion of requirements in the CEC's decision on an AFC to assure protection of environmental quality and requires submission of information to the CEC concerning proposed water resources and water quality protection.	Project will comply with the requirements of the CEC to assure protection of water resources.	CEC and RWQCB	C. Raley / J. Carmona (RWQCB)

Table 2.5-2
Summary of LORS – Water Resources
(Continued)

LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
CWC §§ 13271 – 13272; 23 CCR §§2250 – 2260	Reporting of releases of reportable quantities of hazardous substances or sewage and releases of specified quantities of oil or petroleum products.	No releases of hazardous substances are anticipated; however, Project will conform to all State water quality standards, both qualitative and quantitative. If an unintended spill occurs, reporting of spill will be prompt.	SWRCB and RWQCB	C. Raley and J. Carmona (RWQCB)
CWC §13260 – 13269; 23 CCR Chapter 9	Requires the filing of a Report of Waste Discharge and provides for the issuance of WDRs with respect to the discharge of any waste that can affect the quality of the waters of the state.	An ROWD will be filed for the RO Unit discharge waste. The RO Unit will be constructed and monitored in accordance with RWQCB requirements.	SWRCB and RWQCB	C. Raley and J. Carmona (RWQCB)
CEQA, Public Resources Code §21000 <i>et seq.</i> ; CEQA Guidelines, 14 CCR §15000 <i>et seq.</i> ; Appendix G	The CEQA Guidelines (Appendix G) contain definitions of projects that can be considered to cause significant effects to water resources.	Project will comply with the requirements of the CEC to assure protection of water resources.	CEC	--
Title 27, CCR Division 2, §20375, SWRCB – Special Requirements for Surface Impoundments (C15: §2548)	This regulation governs the design requirements for surface impoundments.	The evaporation pond for wastewater disposal will be designed and operated in accordance with the requirements of this section.	SWRCB and RWQCB	C. Raley and J. Carmona (RWQCB)
Local Jurisdiction				
Imperial County Ordinance, Title 9, §91605.00 – 91605.06	These codes regulate flood hazard reduction.	The Project will be designed by a licensed engineer and meet all floodplain design standards.	Imperial County	P. Valenzuela
Imperial County Ordinance, Title 9, §90515.00 – 90515.11	The codes classify the Project as light industrial development and regulates its uses	The Project will conform to all code standards	Imperial County	P. Valenzuela
Imperial County APCD, Regulation VIII, Fugitive Dust Rules	--	The Project will conform to all code standards	Imperial County	--

Table 2.5-2
Summary of LORS – Water Resources
(Continued)

LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
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Source: URS Corporation, 2008.

Notes:

APCD	=	Air Pollution Control District
CEQA	=	California Environmental Quality Act
CFR	=	Code of Federal Regulations
CWA	=	Clean Water Act
CWC	=	California Water Code
LORS	=	laws, ordinances, regulations, and standards
NOI	=	Notice of Intent
NPDES	=	National Pollutant Discharge Elimination System
RWQCB	=	Regional Water Quality Control Board
SWRCB	=	State Water Resources Control Board
SWPPP	=	Storm Water Pollution Prevention Plan
USC	=	United States Code

Table 2.5-3
Agency Contact List for LORS

Agency	Contact	Title	Telephone
California Regional Water Quality Control Board, Colorado River Basin Region	John Carmona	NPDES, 401 Certification, Storm Water	760-346-7491
California Regional Water Quality Control Board, Colorado River Basin Region	Cliff Raley	Chapter 15 and Non-Chapter 15	760-776-8962
State Water Resources Control Board	Jim Kassel	Water Rights	916-341-5446
California Department of Health Services	Jeff Stone	Recycled Water	805-566-9767
California Department of Health Services	Joseph Crisologo	Water Security	213-580-5723
Imperial County Planning/Building Development Department	Patricia A. Valenzuela	Planner II	760-482-4320
California Department of Water Resources, Division of Planning and Local Assistance, Southern District	Tim Ross	--	818-500-1645
DHS/Federal Emergency Management Agency, Region IX,	Sally Ziolkowski	Director, Flood Insurance and Mitigation Division	510-627-7100

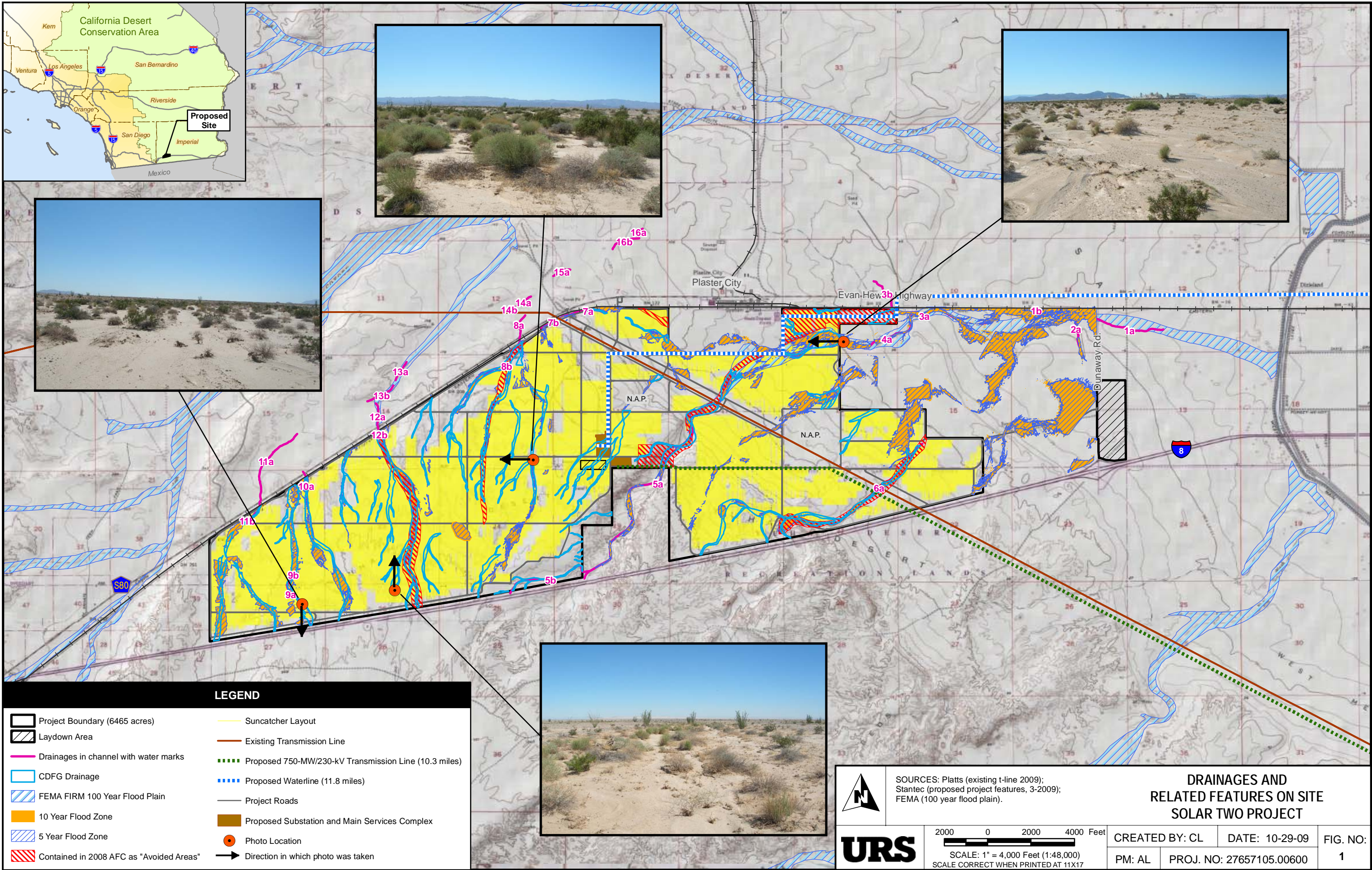
Sources: Colorado River Basin RWQCB, 208; CDPH, 2008a; CDPH, 2008b (References per Section 5.5 of Project AFC).

References

Federal Highway Administration, Evaluating Scour at Bridges, 2001.

RMT, Hydrologic Assessment Report, SES Solar Two Project Site. October, 2009

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BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
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**APPLICATION FOR CERTIFICATION
For the SES SOLAR TWO PROJECT**

Docket No. 08-AFC-5

PROOF OF SERVICE

(Revised 8/17/09)

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DECLARATION OF SERVICE

I, Angela Leiba, declare that on October 30, 2009, I served and filed copies of the attached, Additional Supportive Materials - Biology and Water. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [\[http://www.energy.ca.gov/sitingcases/solartwo/index.html\]](http://www.energy.ca.gov/sitingcases/solartwo/index.html).

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

FOR SERVICE TO ALL OTHER PARTIES:

 X sent electronically to all email addresses on the Proof of Service list;

 X by personal delivery or by depositing in the United States mail at _____ with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

 X sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (***preferred method***);

OR

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CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 08-AFC-5
1516 Ninth Street, MS-4
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I declare under penalty of perjury that the foregoing is true and correct.

Original Signed By

Angela Leiba